Phase II - Objective Mobile Infrared Scene Projector (MIRSP)

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MIRSP Team

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Background

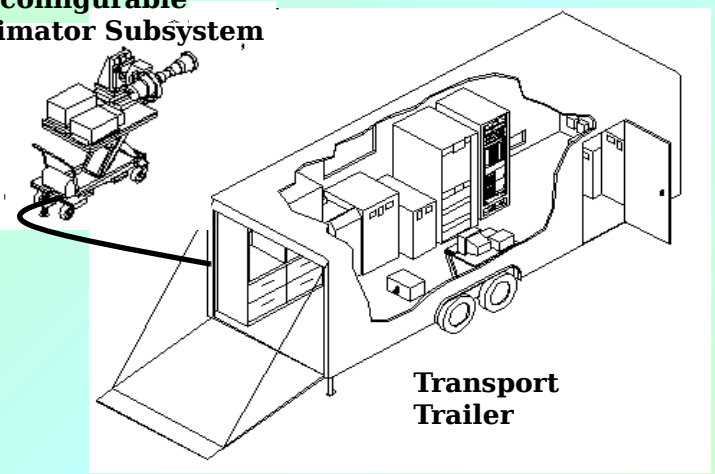
- Phase I “Pathfinder” MIRSP - risk reduction prototype
  - First truly mobile IRSP capability
- Focus on mobility and integration of existing technology to gather lessons learned and refine requirements
- Developed and integrated by Redstone Technical Test Center (RTTC) under structured program with formal requirements, design reviews, IPTs, CDRLs, acceptance testing, etc.
- Delivered to Aviation Technical Test Center (ATTC) Dec. 2000
- Used to support T&E of Starstreak and scheduled for application to Comanche
- 7 major subsystems

"Pathfinder" MIRSP Components

Subsystem	Source	Developer
Software Control Subsystem	Custom	RTTC
Computer Image Generator	COTS	SGI (Onyx2)
Control Electronics Subsystem	Modified COTS	CSA
Infrared Emitter Subsystem	GFE from DIRSP	Honeywell
Projection Optics Subsystem	Custom	J anos
Non-Uniformity Correction Subsystem		
Radiometer	COTS	FLIR Systems Inc.
Interface	Custom	RTTC
Frame Grabber	COTS	Imaging Technologies
Mounting Platform Subsystem	COTS	Aerotek & Wells Cargo

Apache Demo

Objective MIRSP



CUSTOMER/ USERS

- **Customers -**
  - Aviation Technical Test Center (ATTC)
  - Redstone Technical Test Center (RTTC)
- **Users -**
  - COMANCHE (RAH-66)
  - LONGBOW APACHE
  - KIOWA WARRIOR-ARMED
  - SOF MK-60
  - FUTURE COMBAT SYSTEMS
  - JAVELIN MISSILE SYSTEM
  - Common Missile
  - M1A2 SEP
  - LRAS3
  - LOSAT
  - ITAS
  - IBAS
  - Avenger
  - UGV
  - UAV

DESCRIPTION

The MIRSP system will provide a mobile capability to assess EO/IR sensors and subsystems ***while installed on the weapons platform.*** MIRSP will provide complete, accurate, and timely test data for improved decision making capability and confidence, which ultimately reduces the overall program risk of the weapon system.

FUNCTIONAL DATA

- Supports installed EO system/subsystem testing
- Mobile/transportable and reconfigurable/modular
- Spectral Band: 0.2-14.0 um (minimum)
- Frame Rates: 30-180 hertz
- Project dynamic operational scenarios as well as static target sources

Acquisition/Contracting

Strategy

- Combination
  - In-house development & integration
  - Competitive awards
- Potential Associate Contractor Agreement (ACA) required
- Leverage development of Large Format Resistor Array from CTEIP IRSS P3I project
- Leverage existing Government logistics support Automated Test Equipment (ATE) to minimize non-recurring costs (CASS, IFTE, TETS)
- Development: FY 03-09 (extended to FY09 to accommodate large format arrays developed through the CTEIP effort)

Technology Vendors

- Aegis
- British Aerospace (BAe)
- Diversified Optics (DIOP)
- Dynetics
- Indigo Systems
- Janos Technology, Inc.
- Mantech
- Mission Research Corporation (MRC)
- Northrup Grumman Amherst Systems
- Optical Science Corp.
- PEI, Inc.
- Photon Research Associates
- Santa Barbara Infrared (SBIR)
- SPARTA

Program Schedule/Funding

	FY03	FY04	FY05	FY06	FY07	FY08	FY09
System Dev. & Demonstration	△						▽
PDR		△					
CDR			△				
Integration & Test			△				▽
Phase II - IOC					△		
Phase II - FOC							△

Dollars in Thousands	FY03	FY04	FY05	FY06	FY07	FY08	FY09	Complete
TOTAL Required	$$	$$	$$	$$	$$	$$	$$	$$$$
RDTE Funded	$$	$$	$$	$$	$	0	0	
Total Unfunded	0	$	$	$	$$	$$	$$	
Quantities	0	0	0	0	0	0	2	2

Summary

- Objective MIRSP requirements and funding will be finalized over the next couple of months
- Sources sought to perform development of large format resistor array IR scene projection system
- Possible competitive award for STOC prime as vehicle to COTS components at a reasonable cost - as early as FY03

Back-up

Acronyms

ATE	Automated Test Equipment
ATTC	Aviation Technical Test Center
CASS	Consolidate Automated Support System
COTS	Commercial of the Shelf
CSA	Computer Science and Applications
CTEIP	Central Test & Evaluation Investment Program
DIRSP	Dynamic Infrared Scene Projector
EO	Electro-Optical
FLIR	Forward Looking Infrared
GFE	Government Furnished Equipment
IFTE	Integrated Family of Test Equipment
IR	Infrared
IRSS	Infrared Sensor Stimulator
MIRSP	Mobile Infrared Scene Projector
NUC	Non-Uniformity Correction
P3I	Pre-Planned Product Improvement
RTTC	Redstone Technical Test Center
SGI	Silicon Graphics, Inc.
STOC	STRICOM Omnibus Contract
TETS	Third Echelon Test Set
UUT	Unit Under Test